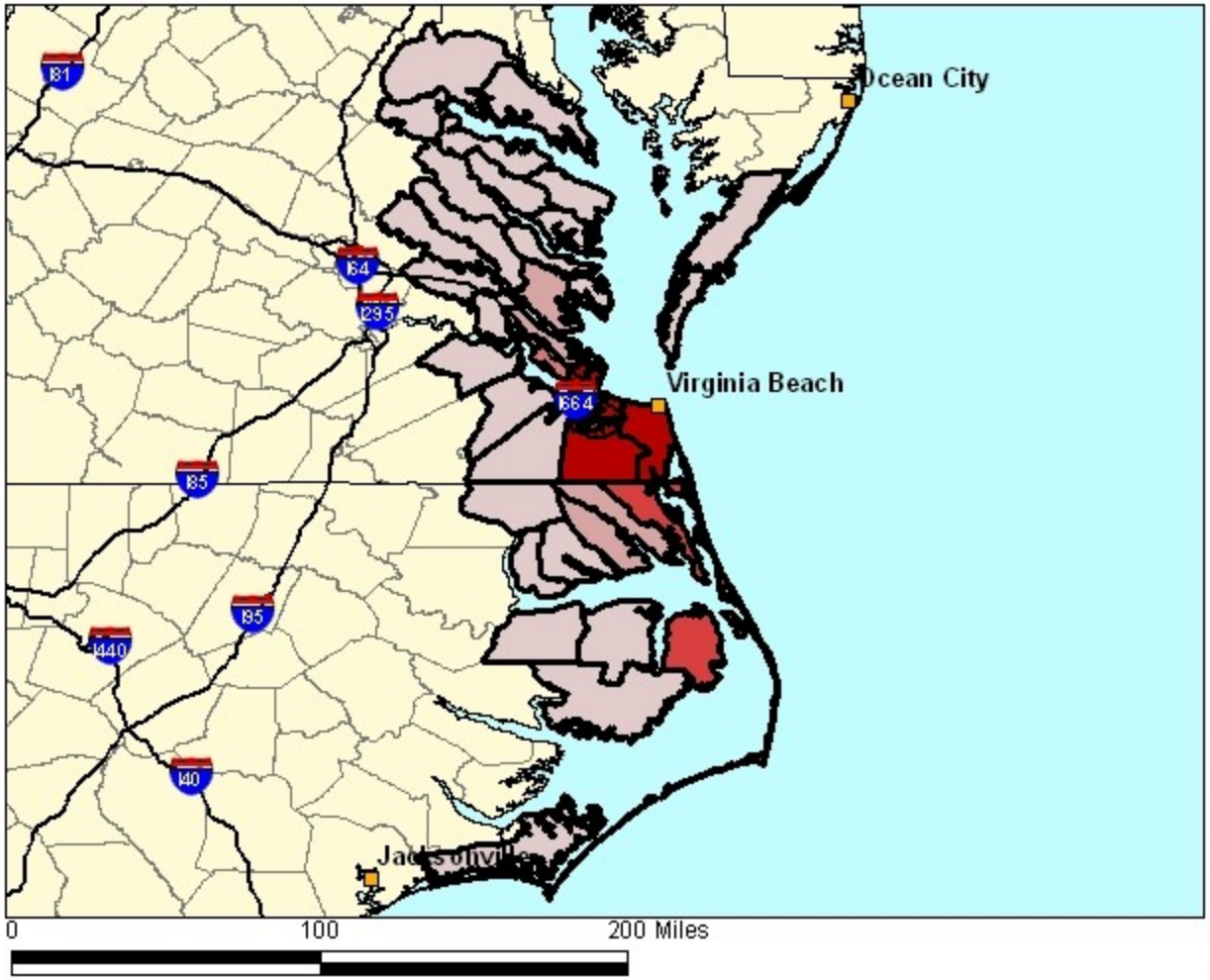
US Army Corps of Engineers

Hurricane Exercise Debris Model

Landfall Expected In About 4 Hours

For Planning Purposes Only



Post Landfall Debris Model Results

Virginia - 20,297,000 Yards
North Carolina - 1,755,000 Yards
Maryland - 25,000 Yards

Model results per county on following page

This model is based on a Category 3 storm making landfall near Norfolk, VA.

Debris

- < 100,000 cubic yards
- 100,000 - 249,999 cubic yards
- 250,000 - 499,999 cubic yards
- 500,000 - 999,999 cubic yards
- >1,000,000 cubic yards

Information provided on this page displays a Category 3 storm making landfall near Norfolk, VA. These projections are based on information from the NHC (1630 EDT 06/06/2007) forecast. The amount of debris forecasted is possible total volume, not necessarily the volume that may need to be removed with Federal funds.

Details about this model may be obtained at https://englink.usace.army.mil or contact ENGLink at 1-877-936-4546

Hurricane Exercise Debris Model	
Generated By: Siemsen, LRL 1700 EDT 06/06/2007	
Sources: HURREVAC LRL-DEBRIS	Page 1 of 12

US Army Corps of Engineers

Hurricane Exercise Debris Model

Landfall Expected In About 4 Hours

For Planning Purposes Only

State	Yards per State	County	Yards per County
Maryland		Charles	14,000
		St Marys	11,000
Maryland	25,000		
North Carolina		Camden	114,000
		Carteret	< 1,000
		Chowan	7,000
		Currituck	502,000
		Dare	856,000
		Gates	5,000
		Hyde	18,000
		Pasquotank	218,000
		Perquimans	14,000
		Tyrrell	18,000
		Washington	3,000
North Carolina	1,755,000		
Virginia		Accomack	3,000
		Chesapeake	1,977,000
		Essex	4,000
		Gloucester	128,000
		Hampton City	1,015,000
		Isle Of Wight	18,000
		James City	28,000
		King And Queen	4,000
		King George	< 1,000
		King William	2,000
		Lancaster	37,000
		Mathews	90,000
		Middlesex	66,000
		New Kent	< 1,000
		Newport News	497,000

State	Yards per State	County	Yards per County
Virginia		Norfolk City	4,193,000
(continued)		Northampton	56,000
		Northumberland	23,000
		Poquoson City	90,000
		Portsmouth	578,000
		Richmond	13,000
		Suffolk City	73,000
		Surry	2,000
		Virginia Beach	11,244,000
		Westmoreland	10,000
		Williamsburg	7,000
		York	139,000
Virginia	20,297,000		

The amount of debris forecasted is possible total volume, not necessarily the volume that may need to be removed with Federal funds.

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or contact ENGLink at 1-877-936-4546

Hurricane Exercise Debris Model

Generated By:
Siemsen, LRL 1700 EDT 06/06/2007

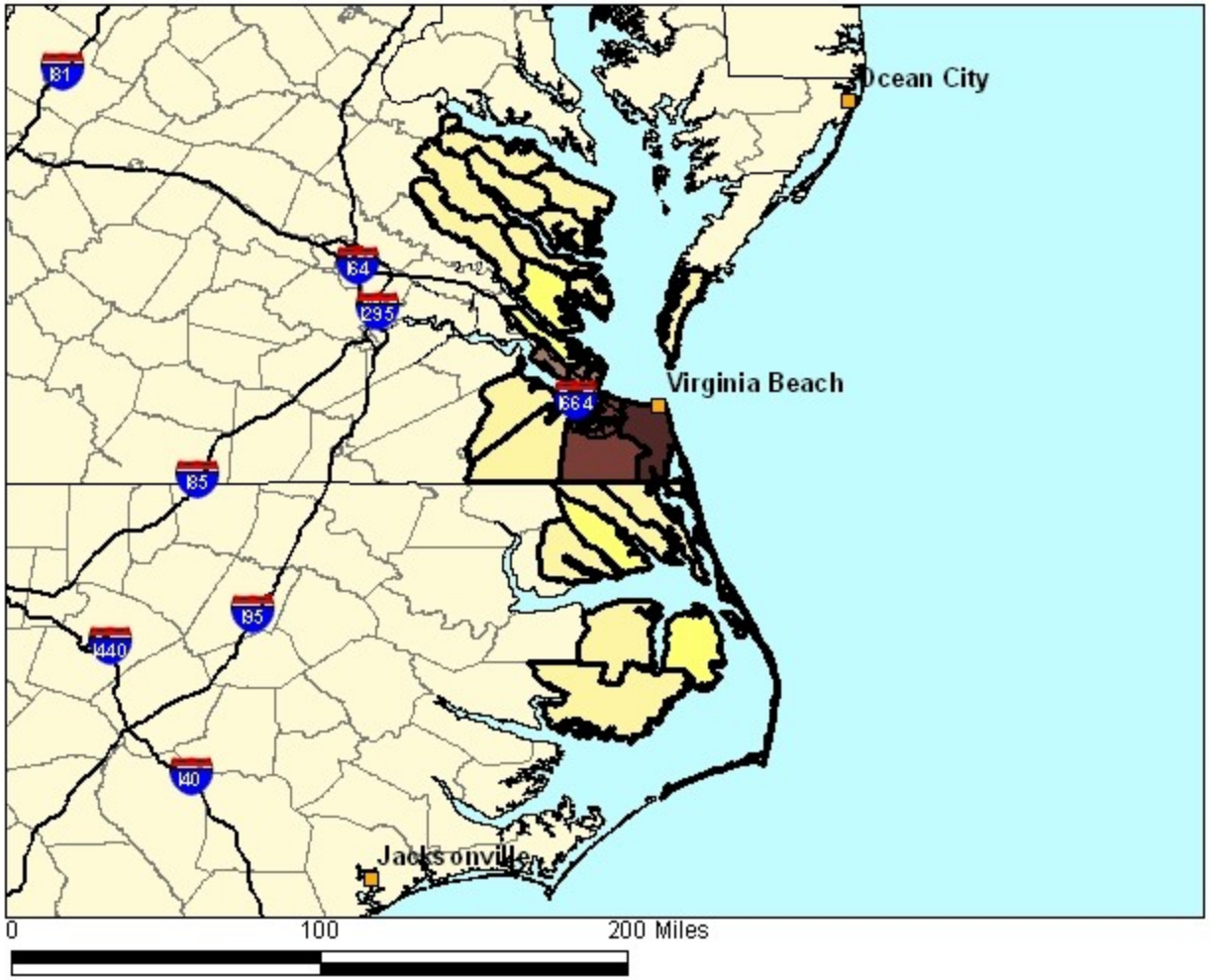
Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Exercise Population Model

Landfall Expected In About 4 Hours

For Planning Purposes Only



Post Landfall Population Model Results

Virginia - 1,484,000
North Carolina - 112,000

Model results per county on following page

This model is based on a Category 3 storm making landfall near Norfolk, VA.

Population

- < 25,000 persons
- 25,000 - 99,999 persons
- 100,000 - 174,999 persons
- 175,000 - 249,999 persons
- > 250,000 persons

Information provided on this page displays a Category 3 storm making landfall near Norfolk, VA. These projections are based on information from the NHC (1630 EDT 06/06/2007) forecast. The numbers of persons included in this model output are those that would be included within estimated hurricane force winds (Census 2000 values adjusted to July 2005 values).

Details about this model may be obtained at https://englink.usace.army.mil or contact ENGLink at 1-877-936-4546

Hurricane Exercise Population Model	
Generated By: Siemsen, LRL 1700 EDT 06/06/2007	
Sources: HURREVAC LRL-DEBRIS	Page 3 of 12

US Army Corps of Engineers

Hurricane Exercise Population Model

Landfall Expected In About 4 Hours

For Planning Purposes Only

State	Population per State	County	Population per County
North Carolina		Camden	9,000
		Currituck	24,000
		Dare	34,000
		Hyde	2,000
		Pasquotank	37,000
		Perquimans	3,000
		Tyrrell	3,000
North Carolina	112,000		
Virginia		Chesapeake	219,000
		Essex	< 1,000
		Gloucester	37,000
		Hampton City	146,000
		Isle Of Wight	2,000
		King And Queen	< 1,000
		Lancaster	12,000
		Mathews	10,000
		Middlesex	11,000
		Newport News	169,000
		Norfolk City	232,000
		Northampton	9,000
		Northumberland	6,000
		Poquoson City	12,000
		Portsmouth	101,000
		Richmond	6,000
		Suffolk City	21,000
		Virginia Beach	439,000
		Westmoreland	< 1,000
		York	52,000
Virginia	1,484,000		

The number of persons estimated to be within the hurricane force winds comes from Census 2000 values adjusted to July 2005 values.

Details about this model may be obtained at **https://englink.usace.army.mil** or contact ENGLink at 1-877-936-4546

Hurricane Exercise Population Model

Generated By:
Siemsen, LRL 1700 EDT 06/06/2007

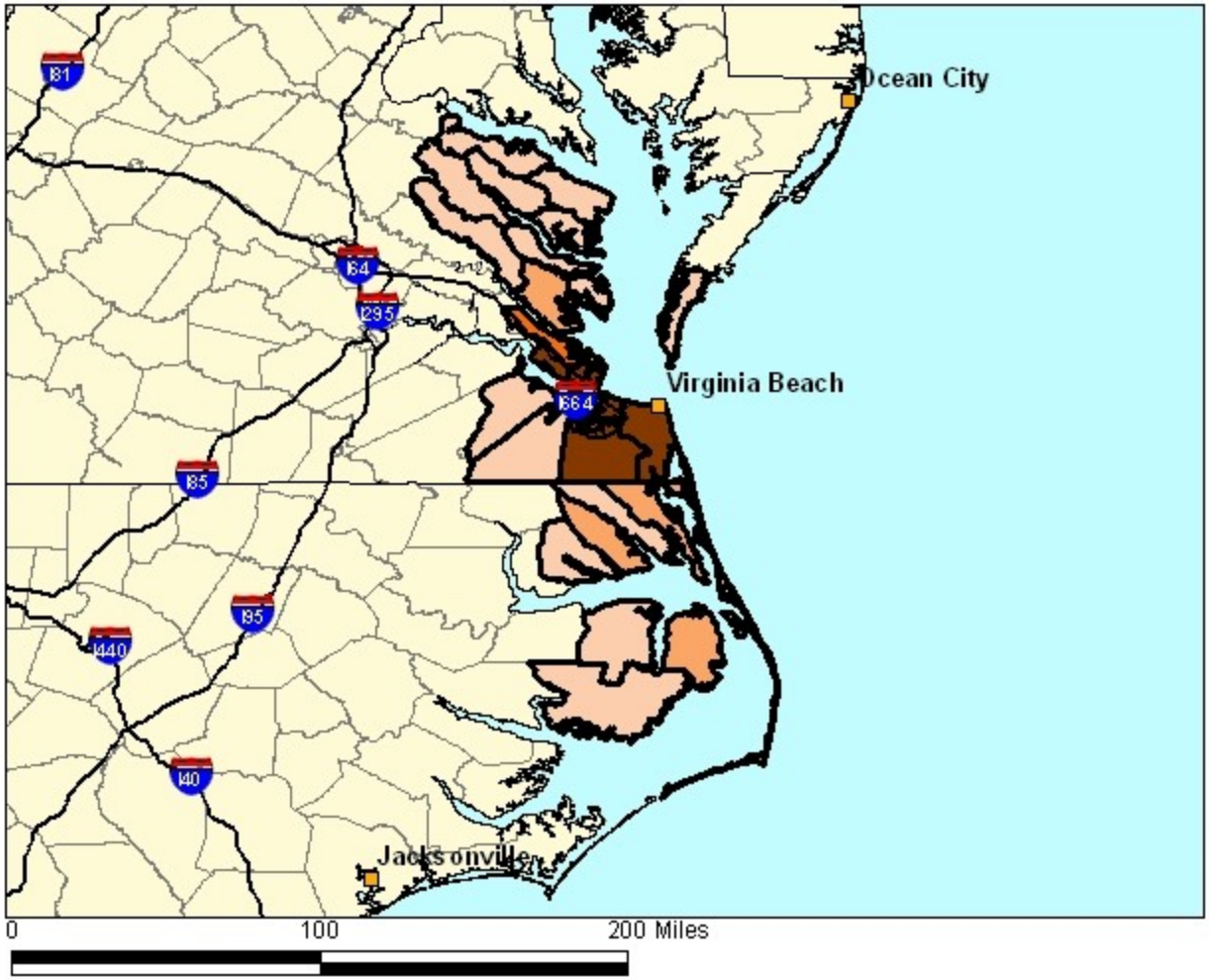
Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Exercise Households Model

Landfall Expected In About 4 Hours

For Planning Purposes Only



Post Landfall Households Model Results

Virginia - 553,000
North Carolina - 42,000

Model results per county on following page

This model is based on a Category 3 storm making landfall near Norfolk, VA.

Households

- < 7,500 households
- 7,500 - 14,999 households
- 15,000 - 24,999 households
- 25,000 - 49,999 households
- > 50000 households

Information provided on this page displays a Category 3 storm making landfall near Norfolk, VA. These projections are based on information from the NHC (1630 EDT 06/06/2007) forecast. The numbers of households included in this model output are those that would be included within estimated hurricane force winds (Census 2000 values adjusted to July 2005 values).

Details about this model may be obtained at https://englink.usace.army.mil or contact ENGLink at 1-877-936-4546

Hurricane Exercise Households Model	
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Sources: HURREVAC LRL-DEBRIS	Page 5 of 12

US Army Corps of Engineers

Hurricane Exercise Households Model

Landfall Expected In About 4 Hours

For Planning Purposes Only

State	Households per State	County	Households per County
North Carolina		Camden	4,000
		Currituck	9,000
		Dare	15,000
		Hyde	< 1,000
		Pasquotank	14,000
		Perquimans	< 1,000
		Tyrrell	< 1,000
North Carolina	42,000		
Virginia		Chesapeake	77,000
		Essex	< 1,000
		Gloucester	14,000
		Hampton City	54,000
		Isle Of Wight	< 1,000
		King And Queen	< 1,000
		Lancaster	6,000
		Mathews	4,000
		Middlesex	5,000
		Newport News	67,000
		Norfolk City	86,000
		Northampton	4,000
		Northumberland	3,000
		Poquoson City	5,000
		Portsmouth	39,000
		Richmond	2,000
		Suffolk City	8,000
		Virginia Beach	160,000
		Westmoreland	< 1,000
		York	19,000
Virginia	553,000		

The number of households estimated to be within the hurricane force winds comes from Census 2000 values adjusted to July 2005 values.

Details about this model may be obtained at https://englink.usace.army.mil or contact ENGLink at 1-877-936-4546

Hurricane Exercise Households Model

Generated By:
Siemsen, LRL 1700 EDT 06/06/2007

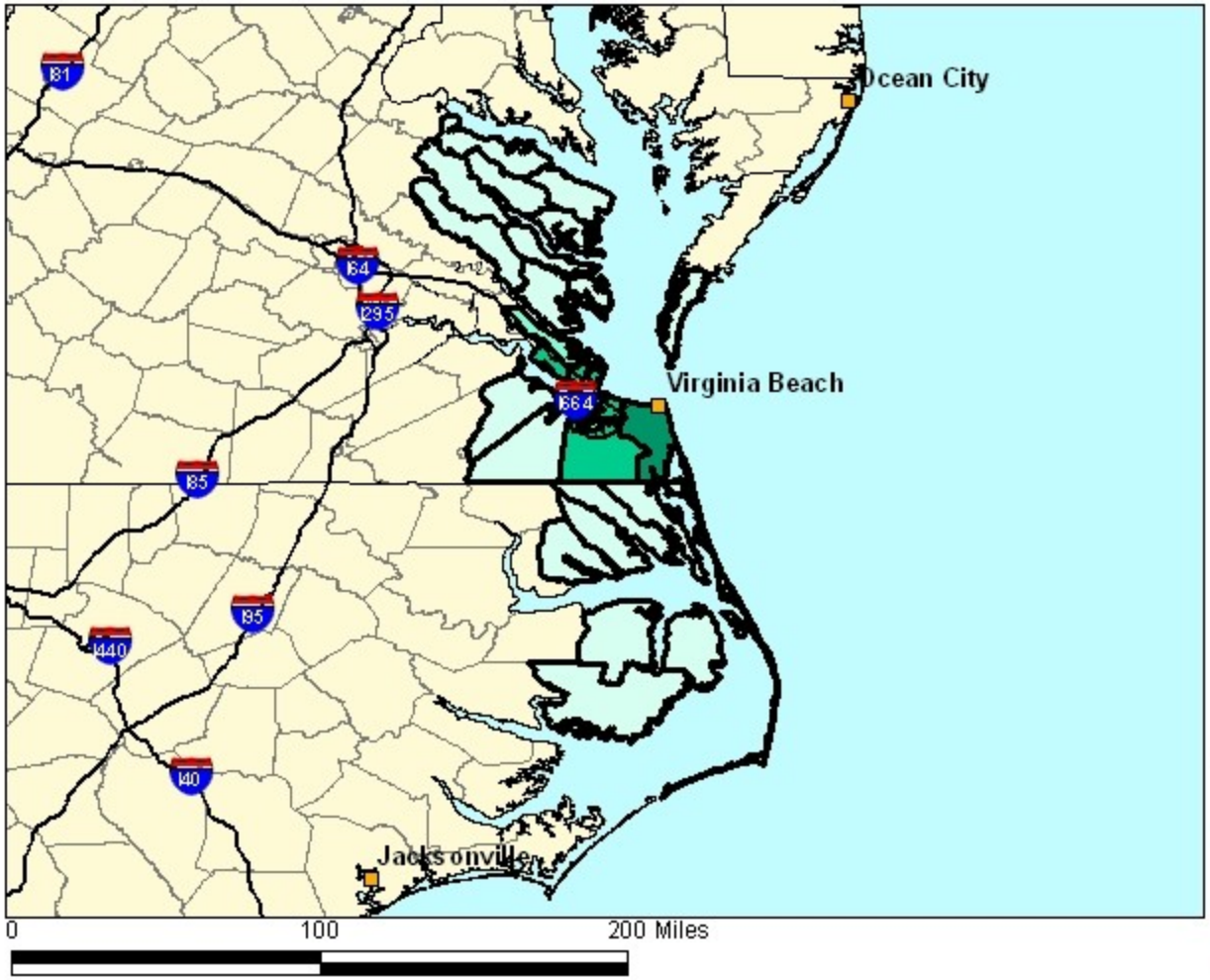
Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Exercise Commodities Model

Landfall Expected In About 4 Hours

For Planning Purposes Only



Post Landfall Ice/Water Model Results

Day One / Day Two / Day Three
VA – 33/65/129 Truckloads Each
NC – 3/6/12 Truckloads Each

Model results per county on following page

This model is based on a Category 3 storm making landfall near Norfolk, VA.

Commodities

- < 5 Trucks Each
- 5 - 10 Trucks Each
- 11 - 20 Trucks Each
- 21 - 40 Trucks Each
- > 40 Trucks Each

Information provided on this page displays a Category 3 storm making landfall near Norfolk, VA. These projections are based on information from the NHC ***(1630 EDT 06/06/2007)*** forecast. The amount of commodities forecasted is based on Mission Guide Book requirements (8 pounds of ice per person per day) and SME input. The graphic represents single day needs with full distribution system in place and operating.
Details about this model may be obtained at https://englink.usace.army.mil
or contact ENGLink at 1-877-936-4546

Hurricane Exercise Commodities Model	
Generated By: Siemsen, LRL 1700 EDT 06/06/2007	
Sources: HURREVAC LRL-DEBRIS	Page 7 of 12

US Army Corps of Engineers

Hurricane Exercise Commodities Model

Landfall Expected In About 4 Hours

For Planning Purposes Only

State	Truckloads per State	County	Truckloads per County
North Carolina		Camden	1
		Currituck	2
		Dare	3
		Hyde	1
		Pasquotank	3
		Perquimans	1
		Tyrrell	1
North Carolina	12		
Virginia		Chesapeake	18
		Essex	1
		Gloucester	3
		Hampton City	12
		Isle Of Wight	1
		King And Queen	1
		Lancaster	1
		Mathews	1
		Middlesex	1
		Newport News	14
		Norfolk City	19
		Northampton	1
		Northumberland	1
		Poquoson City	1
		Portsmouth	9
		Richmond	1
		Suffolk City	2
		Virginia Beach	36
		Westmoreland	1
		York	5
Virginia	129		

The amount of commodities forecasted is based on Mission Guide Book requirements (8 pounds of ice per person per day) and SME input and the above table indicates suggested needs based on phased deployment of a commodities distribution system. The assumption in this scenario is that 40% of the resident population affected by the hurricane will have power outage in this area and cause a need for ice and water.

Details about this model may be obtained at https://englink.usace.army.mil or contact ENGLink at 1-877-936-4546

Hurricane Exercise Commodities Model

Generated By:
Siemsen, LRL 1700 EDT 06/06/2007

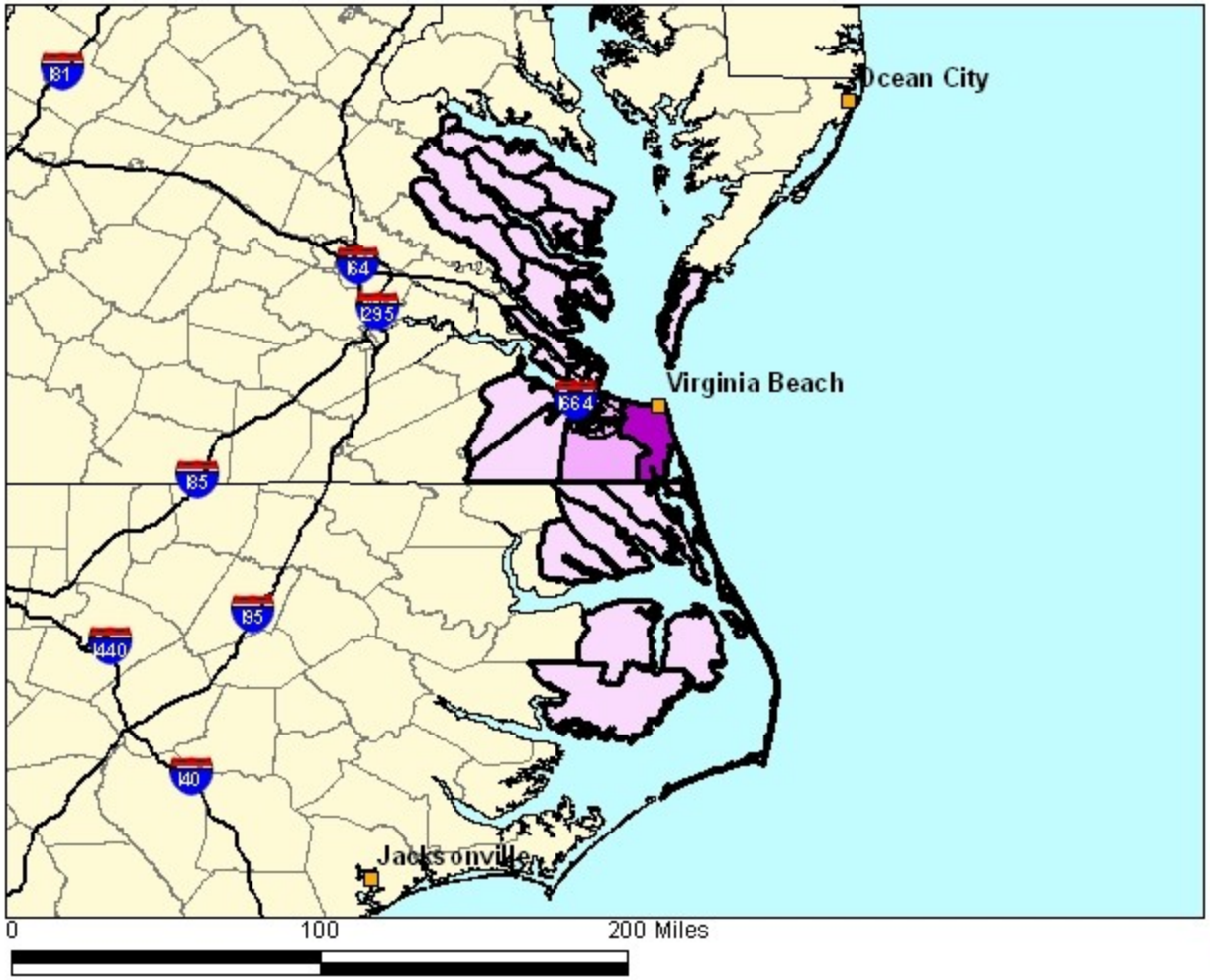
Sources:
HURREVAC
LRL-DEBRIS

Hurricane Exercise Temporary Housing Model

US Army Corps of Engineers

Landfall Expected In About 4 Hours

For Planning Purposes Only



Post Landfall Temporary Housing Model Results

Virginia - 16,200
North Carolina - 1,700

Model results per county on following page

This model is based on a Category 3 storm making landfall near Norfolk, VA.

Temporary Housing

- < 2,000 units
- 2,000 - 3,999 units
- 4,000 - 5,999 units
- 6,000 - 9,999 units
- > 10,000 units

Information provided on this page displays a Category 3 storm making landfall near Norfolk, VA. These projections are based on information from the NHC (1630 EDT 06/06/2007) forecast. Temporary housing is based on 1% in CAT 1, 3% in CAT 2 and 5% in CAT 3.

Details about this model may be obtained at https://englink.usace.army.mil or contact ENGLink at 1-877-936-4546

Hurricane Exercise Housing Model	
Generated By: Siemsen, LRL 1700 EDT 06/06/2007	
Sources: HURREVAC LRL-DEBRIS	Page 9 of 12

US Army Corps of Engineers

Hurricane Exercise Temporary Housing Model

Landfall Expected In About 4 Hours

For Planning Purposes Only

State	per State	County	per County
North Carolina		Camden	100
		Currituck	500
		Dare	700
		Hyde	< 100
		Pasquotank	400
		Perquimans	< 100
		Tyrrell	< 100
North Carolina	1,700		
Virginia		Chesapeake	2,300
		Essex	< 100
		Gloucester	200
		Hampton City	1,300
		Isle Of Wight	< 100
		King And Queen	< 100
		Lancaster	< 100
		Mathews	200
		Middlesex	< 100
		Newport News	700
		Norfolk City	3,500
		Northampton	< 100
		Northumberland	< 100
		Poquoson City	200
		Portsmouth	800
		Richmond	< 100
		Suffolk City	< 100
		Virginia Beach	6,800
		Westmoreland	< 100
		York	200
Virginia	16,200		

THIS IS AN EXPERIMENTAL MODEL!!

Temporary housing is based on 1% in CAT 1, 3% in CAT 2 and 5% in CAT 3.

Details about this model may be obtained at https://englink.usace.army.mil
or contact ENGLink at 1-877-936-4546

Hurricane Exercise Housing Model

Generated By:
Siemsen, LRL 1700 EDT 06/06/2007

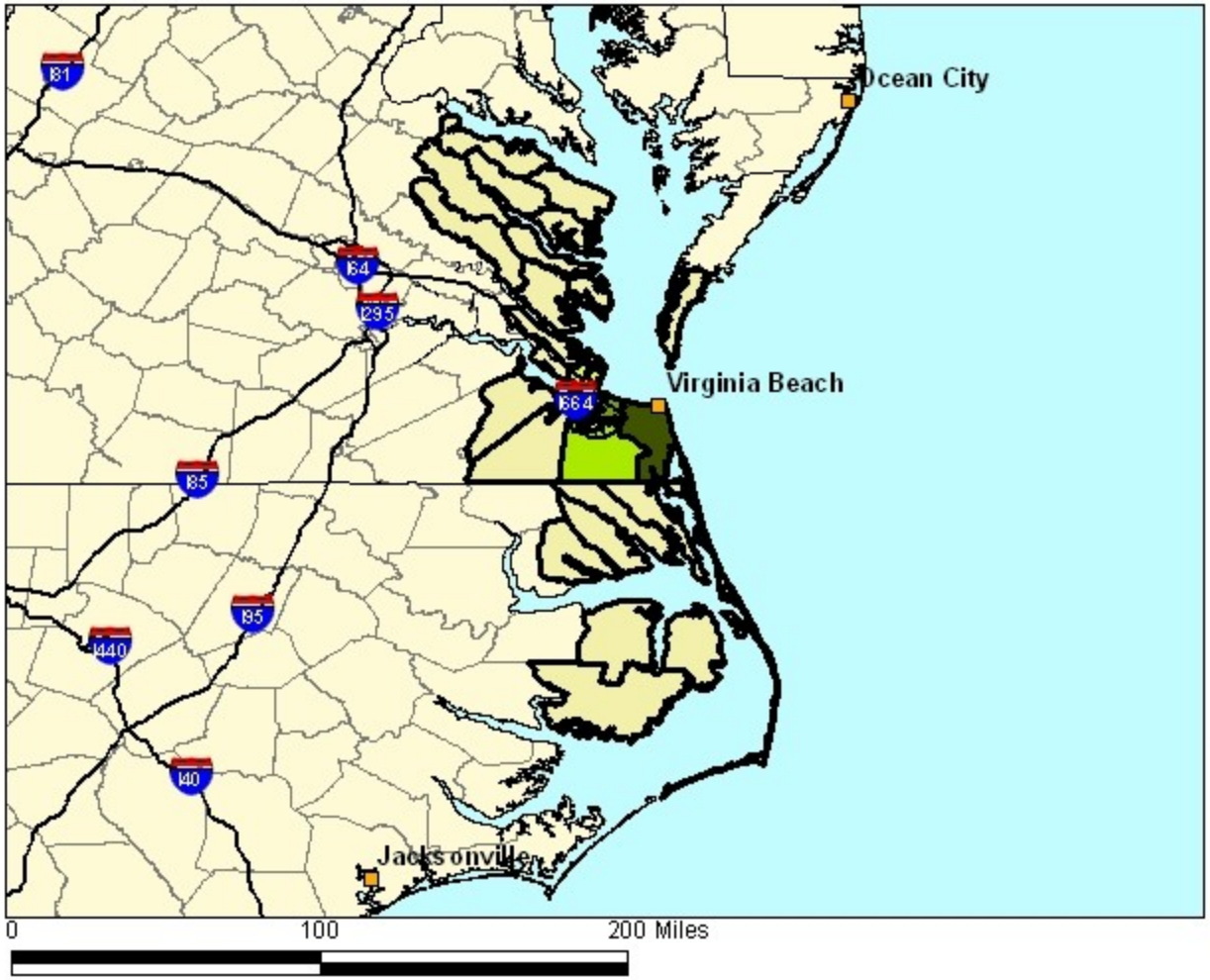
Sources:
HURREVAC
LRL-DEBRIS

Hurricane Exercise Temporary Roofing Model

US Army Corps of Engineers

Landfall Expected In About 4 Hours

For Planning Purposes Only



Post Landfall Temporary Roofing Model Results

Virginia - 35,000
North Carolina - 3,200

Model results per county on following page

This model is based on a Category 3 storm making landfall near Norfolk, VA.

Temporary Roofing

- < 2,000 units
- 2,000 - 3,999 units
- 4,000 - 5,999 units
- 6,000 - 9,999 units
- > 10,000 units

Information provided on this page displays a Category 3 storm making landfall near Norfolk, VA. These projections are based on information from the NHC (1630 EDT 06/06/2007) forecast. Temporary roofing is based on 2% in CAT 1, 6% in CAT 2 and 10% in CAT 3.

Details about this model may be obtained at https://englink.usace.army.mil or contact ENGLink at 1-877-936-4546

Hurricane Exercise Roofing Model	
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US Army Corps of Engineers

Hurricane Exercise Temporary Roofing Model

Landfall Expected In About 4 Hours

For Planning Purposes Only

State	House Units per State	County	House Units per County
North Carolina		Camden	200
		Currituck	900
		Dare	1,400
		Hyde	< 100
		Pasquotank	700
		Perquimans	< 100
		Tyrrell	< 100
North Carolina	3,200		
Virginia		Chesapeake	4,500
		Essex	< 100
		Gloucester	400
		Hampton City	2,500
		Isle Of Wight	< 100
		King And Queen	< 100
		Lancaster	200
		Mathews	300
		Middlesex	200
		Newport News	1,400
		Norfolk City	6,900
		Northampton	200
		Northumberland	< 100
		Poquoson City	300
		Portsmouth	1,500
		Richmond	< 100
		Suffolk City	200
		Virginia Beach	16,000
		Westmoreland	< 100
		York	400
Virginia	35,000		

THIS IS AN EXPERIMENTAL MODEL!!

Temporary roofing is based on 2% in CAT 1, 6% in CAT 2 and 10% in CAT 3.

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Hurricane Exercise Roofing Model

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Sources:
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LRL-DEBRIS